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CLAIMS

1. An aldehyde oxidase gene which is a 4.4 Kbp gene obtainable from a plant and which encodes an amino acid sequence of an enzyme capable of oxidizing an aldehyde compound to a carboxylic acid.

2. The aldehyde oxidase gene according to claim 1, wherein the aldehyde compound is indoleacetaldehyde and the carboxylic acid is indoleacetic acid.

10 3. The aldehyde oxidase gene according to claim 1 or 2 which is derived from maize plant (*Zea mays* L.).

4. The aldehyde oxidase gene according to claim 1 which is a nucleotide sequence encoding an amino acid sequence shown by SEQ ID NO: 1.

15 5. The aldehyde oxidase gene according to claim 4 which has a nucleotide sequence shown by SEQ ID NO: 2 (loci of CDS being 46..4120).

6. The aldehyde oxidase gene according to claim 1 which is a nucleotide sequence encoding an amino acid sequence shown by SEQ ID NO: 3.

7. The aldehyde oxidase gene according to claim 6 which has a nucleotide sequence shown by SEQ ID NO: 4 (loci of CDS being 91..4138).

25 8. A plasmid comprising the aldehyde oxidase gene according to claim 1, ~~2, 3, 4, 5, 6 or 7.~~

3 9. A ^{transformed host cell} transformant transformed by introducing the plasmid according to claim 8 into a host cell.

10 10. The ^{transformed host cell} transformant according to claim 9, wherein the host cell is a microorganism.

5 11. The ^{transformed host cell} transformant according to claim 9, wherein the host cell is a plant.

12. A process for constructing an expression plasmid which comprises ligating (1) a promoter capable of functioning in a plant cell, (2) an aldehyde oxidase gene according to claim 1, ~~2, 3, 4, 5, 6 or 7~~ and (3) a terminator capable of functioning in a plant in a functional manner and in the said order described above.

10 13. An expression plasmid comprising (1) a promoter capable of functioning in a plant cell, (2) an aldehyde oxidase gene according to claim 1, ~~2, 3, 4, 5, 6 or 7~~ and (3) a terminator capable of functioning in a plant which are ligated in a functional manner and in the said order described above.

15 14. A process for controlling production of an aldehyde
20 oxidase in a transformant which comprises introducing, into a host cell, an expression plasmid comprising (1) a promoter capable of functioning in a plant cell, (2) an aldehyde oxidase gene and (3) a terminator capable of functioning in a plant which are ligated in a functional manner and in the
25 said order described above to transform said host cell.

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